

## **Identification of aromatic compounds and their sensory characteristics in cassava flakes and “garri” (*Manihot esculenta* Crantz)**

### **ABSTRACT**

Cassava flakes and “garri” are some of the popular cassava products consumed in Africa, Southeast Asia, and Brazil. These products are cherished for their creamy colour and characteristic aroma. The aroma compounds responsible for the unique aroma notes of these products were evaluated by means of solid-phase micro-extraction (SPME). Results confirmed that the divinylbenzene-carboxen-polydimethylsiloxane (DVB-CAR-PDMS) fibre was the most appropriate for the isolation of aroma compounds in the cassava products. In addition, the best response was attained when the extraction temperature was 60°C, equilibrium time 20 min, extraction time 10.94 min, and water addition 35%. Analysis of the odorants led to the identification of 21 compounds with an array of odour notes. However, results of the aroma extract dilution analysis (AEDA), and odour activity values (OAVs) showed that guaiacol, 3-methylbutanal, methylpropanal, and butyric acids contributed intensely to the characteristic aroma of both cassava flakes and garri.

**Keyword:** Cassava flakes; Garri; Aroma compounds; AEDA